



Washington State  
Department of Transportation

## Memorandum

December 18, 2002

TO: Archie Allen  
Carl Pielick  
Rick Rodda  
Charlie Shoop  
Sam Swenson

FROM: David R. Hamacher

SUBJECT: East Channel, I-90 Homer/Hadley and Lacey V. Murrow Bridges

February 2002 I met with maintenance personnel from the East Channel, I-90 Homer/Hadley and Lacey V. Murrow Bridges. Work associated with the February visit consisted of site reconnaissance, atmospheric air monitoring, and discussions with the bridge crew. Representative inspection of the bridges, personnel interviews, and data reviews were performed to remain compliant with regulations pertaining to confined spaces from Washington Administrative Code (WAC 296-62, Part M).

### Findings and Recommendations

- Inspection and monitoring of the subject bridges consisted of a representative walk-through, employee interviews, data reviews, and testing air quality in the confined space areas of the bridges. Oxygen levels from representative areas of the Bridges were all approximately 20.9% to 21%; hydrogen sulfide, carbon monoxide and flammable gases were not detected in the confined space areas of the bridges.
- Dating back several years, I reviewed confined space atmosphere monitoring data from the subject bridges. Also, I spoke with bridge personnel who perform the atmosphere testing. All of the atmosphere monitoring data collected from the bridges revealed NO hazardous atmospheres. Also, employees cannot recall dating back many years, of ever detecting any atmospheric hazards associated with the bridges.
- In compliance with WAC standards pertaining to confined spaces and based on the field observations, employee conversations, data reviews, air monitoring results performed at the sites, the subject bridges are assessed/classified as a **non-permit required confined space**. A confined space assessed/classified as a non-permit required confined space, can be accessed by WSDOT bridge inspectors, maintenance crews, contractors, and other authorized personnel without the use of a permitting system. All non-WSDOT personnel entering confined space areas of WSDOT bridges should be accompanied by a WSDOT employee, and using atmospheric monitoring equipment
- Individuals accessing non-permit required confined spaces of WSDOT bridges are encouraged to enter the spaces using multi-gas detection equipment, radio communications, and use the "buddy" system. Atmospheric testing equipment is readily available at various bridge shops, Region Safety Office, or the Bridge Preservation Office.

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- Work activities inside confined space areas of WSDOT bridges that go “beyond” routine bridge inspection such as, conduit or cable installation, retrofits, lighting installation, welding, cutting, grinding, chemical use, cleaning, painting, etc, must perform another assessment of the confined space. It is highly likely that if tools and/or equipment will be used inside the confined space areas of WSDOT bridges that the space will need to be reclassified as a permit required confined space. Classifying a confined space as a permit-required confined space entails providing training, notification to individuals accessing the space, permit system paper-work, atmospheric monitoring, authorizing and detailing the duties of confined space entrants and attendants, developing a rescue system, etc.

NOTE: There was an extensive amount of pigeon droppings located mostly by the bridge expansion joints and other housed areas. These droppings have the potential of containing the Histoplasmosis disease (causes respiratory problems). To avoid exposure to the disease, personnel should avoid disturbing these areas or breathing the airborne dusts associated with the droppings. If the areas containing the pigeon dropping need to be disturbed, use water to remove the droppings prior to performing the work.

As always, it is a pleasure working with you. I look forward to a continued professional working relationship and providing you with industrial hygiene services. If you have any questions or require any additional information please contact me at 360-705-7746.

DRH: drh

NWR/90brigconfspaces.doc